

Ser. No. 10/733,533

Remarks

Claims 1-16 were pending in the application. Claims 1-11 were withdrawn. Claims 12-16 were rejected. No claims were merely objected to and no claims were allowed. By the foregoing amendment, claims 4, 8, 10, and 11 are canceled, no claims are amended, and claims 17-25 are added. No new matter is presented.

Election/Restriction

Election/restriction was required as follows:

- I. Claims 1-11, drawn to an apparatus for providing detonative cleaning, classified in class 134.
- II. Claims 12-16, drawn to a method of cleaning using combustion gases, classified in class 431, subclass 3.

Applicants affirm the election of Group II with traverse. Traverse is on the grounds that examination of all the claims would not present an undue burden. Although separately classified, the broader search classes for the two groups should substantially or completely overlap. Accordingly, if the restriction requirement is withdrawn, claims 1-3, 5-7, 9, and 12-25 will be examined. If not withdrawn, claims 12-25 will be examined.

Claims Rejections-35 U.S.C. 103

Claims 12-16 were rejected under 35 U.S.C. 103(a) as being obvious and unpatentable over US Patent No. 5,277,153 of Kakabaker in view of US Patent No. 4,333,742 of Tanca. Applicants respectfully traverse the rejection.

Kakabaker was asserted as including "a valve (16) that is opened to release superheated steam into the vessel... [and] considered to be the second valve recited in" claim 12. Office action, page 4, paragraph 2. It was then asserted "that the vessel would necessarily have a first valve for sealing off the vessel when the soot blower device is withdrawn. Therefore, this valve is considered inherent in the disclosure of Kakabaker." Office action, page 4, paragraph 3.

Tanca was asserted as employing "combustion fuel gases for cleaning..." Office action, page 4, final paragraph. It was asserted that it would have been obvious to modify the step of using superheated steam "to incorporate the step of using either combustion fuel gases or

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combustion product/flue gases... as such gases are understood in the art to be satisfactory in dislodging built-up residue..." Office action, page 5, second paragraph.

The grounds of rejection are insufficient for several reasons. No support is provided for the asserted inherency of the additional valve. Why is this allegedly inherent valve not shown? Where would this valve be located? Kakabaker's valve 16 is a valve coupled to a steam supply pipe. Col. 3, line 39. Such a valve is necessary to admit the steam "only when a soot blowing operation is initiated." Col. 3, lines 43-44. This valve is presumably required to avoid a constant flow of steam from the source. Assuming, arguendo, that the combination of references is proper, the valve 16 would become a valve that holds back combustion gases in the combustion. There is no suggestion for such a valve.

No citation was made for the timing of claim 13. The Office action appears to identify the claimed seal as being satisfied by the Kakabaker "seal-bearing arrangement (41)". Office action, page 4, paragraph 2. Said element, however, is identified as containing "rod-type seal assemblies 58 and 59..." Col. 5, line 32. There is no indication how these can be the claimed "seal between the combustion conduit and the access conduit" where the access conduit is the conduit initially sealed by the first valve which the Office action asserts is inherent in Kakabaker. As defined in the Office action, this element is merely internal to the asserted combustion conduit and would not serve the claimed function.

New claim 17 identifies the combustion gases as passing through the second valve. Thus combustion initiates upstream of the second valve. Thus claim 17 would distinguish the second valve from any valve introducing the fuel and/or oxidizer to the conduit. Claim 18 further identifies the second valve as between a main portion of the conduit and the insertion portion of the conduit. (See, claim 11).

New claims 19, 21, and 20 identify temporal relationships between the opening of the second valve and the charge introduction, charge mixing, and combustion initiation, respectively. Support for these is found at paragraph 0034-0036. There is no suggestion for these in the references.

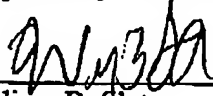
New claim 22 identifies causing a deflagration-to-detonation transition upstream of the second valve. Support for this is found at paragraph 0037. There is no suggestion in the references for this location.

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New claims 23-25 identify particular insertion and conduit assembly steps from paragraphs 0047-0049. There is no suggestion in the references for these.

Accordingly, Applicants submit that claims 1-3, 5-7, 9, and 12-25 are in condition for allowance. Please charge any fees or deficiency or credit any overpayment to our Deposit Account of record.

Respectfully submitted,

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